

donor type, conditioning regimen, and frequency of second transplants between patients who did or did not return for the 1 year evaluation. Among the 106 (90%) patients who had no prior evidence of recurrent malignancy after HCT, 4 (4%) were diagnosed with recurrent malignancy during the LTFU visit. Among the 31 (26%) patients had no prior diagnosis of chronic GVHD, 9 (29%) were diagnosed with chronic GVHD during the LTFU visit. The table shows the overall prevalence of abnormal findings and the types of clinical recommendations documented in letters to the referring physician. Most patients were immunized during the LTFU visit. Pre-immunization titers were protective against pneumococcus in 55% of patients, haemophilus influenza B in 21%, tetanus in 36% and hepatitis B in 26%; 95% required additional doses of at least one vaccine. Bone and lipid abnormalities and absence of protective antibody titers to pneumococcus, haemophilus, tetanus and hepatitis B were not associated with current or previous history of chronic GVHD, current use of steroids or calcineurin inhibitors or number of immunosuppressive agents, suggesting that all patients should be tested. We conclude that routine comprehensive LTFU evaluation at one year after allogeneic HCT detects a high frequency of medical problems requiring active intervention or adjustment of therapy. While the ultimate effect on health outcomes is unknown, our experience suggests that systematic evaluation at one year after HCT is an important part of monitoring for late effects.

Prevalence of problems and frequencies of recommendations

Problem	Prevalence	Recommendations*	
		Continuation of current management	Dose change or new medications
Active chronic GVHD	64%	19%	79%
Abnormal iron studies	71%	26%	15%
Elevated fasting lipids	56%	21%	18%
Abnormal thyroid tests	22%	52%	16%
Osteopenia + osteoporosis	52% + 6%	42%	44%

*Among patients with problem.

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REDUCED INTENSITY CONDITIONING (RIC) IS ASSOCIATED WITH SHORTER DURATION OF CHRONIC GVHD THAN MYELOABLATIVE CONDITIONING AND PROVIDES VERY GOOD QUALITY OF LIFE FOR LONG-TERM SURVIVORS AFTER ALLOGENEIC STEM CELL TRANSPLANTATION
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RIC has been increasingly used over the last decade in patients (pts) not eligible for myeloablative conditioning (MC). RIC allows consistent engraftment with reduced toxicity, yet the long-term effects, the duration of immunosuppressive therapy (IST) and quality of life in long-term survivors are less defined. We compared outcomes of 48 pts given RIC to 41 pts given MC from 1/2000 to 8/2002. The median age was 49 (range, 20–65) and 37 (20–65) years in the RIC and MC groups, respectively ($p = 0.01$). The MC group included more pts with acute leukemia/MDS (68% vs 33%, $p = 0.001$) while pts with myeloma were given only RIC (31% of the RIC group, $p < 0.001$). 48% of pts in the RIC and none in the MC group had a prior autologous SCT ($p < 0.001$). After a median follow-up of 6.1 years (range, 5.1–7.6) 40 pts are alive, 20 after RIC and 20 after MC with estimated survival of 42% (95 ci, 28–56) and 47% (95 ci, 31–63), respectively ($p = NS$). Long-term survival with RIC was achieved across all diagnoses including 6 of 16 pts with acute leukemia/MDS, 6 of 6 pts with CML, 3 of 11 pts with lymphoid malignancies and 5 of 15 pts with myeloma. The corresponding rates in the MC group were 13 of 28, 3 of 4, 4 of 9, and 0 of 0, respectively. Chronic GVHD occurred in 22 pts after RIC [cumulative incidence 48% (35–65)] and in 26 pts after MC [66% (53–83), ($p = 0.07$)]. 12 pts with chronic GVHD after RIC were eventually able to stop IST, 9 died on IST (relapse-5, non-relapse-4) and only

1 of 20 long-term survivors was still on IST at last follow-up. The median duration of IST was 17 months and the probability of stopping IST after 5 years was 79%. In the MC group 10 pts with chronic GVHD were able to stop IST, 8 died on IST (relapse-6, non-relapse-2) and 8 of 20 long-term survivors were still on IST at last follow-up. The median duration of IST was 41 months ($p = 0.05$) and the probability of stopping IST after 5 years was 48% ($p = 0.001$). Two women gave birth in the RIC group while 2 men in the MC group fathered children spontaneously. There was one secondary malignancy in the MC group and 2 pts sustained myocardial infarction (one fatal). One pt in the RIC group had reversible nephrotic syndrome. In summary long term survival is similar after RIC and MC SCT, however IST is significantly shorter after RIC. All 20 pts surviving more than 5 years after RIC sustained excellent quality of life and only one still required IST. These observations require further confirmation in larger registry studies.

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IMPACT OF HEALTH INSURANCE ON TIME TO APPROVAL AND TIME TO TRANSPLANT AMONG PATIENTS RECEIVING HEMATOPOIETIC STEM CELL TRANSPLANTATION

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Access to hematopoietic stem cell transplantation (HSCT), a therapy that can be curative for patients with various life-threatening disorders, is often limited by a patient's health insurance coverage. It is difficult to quantitate the impact of health insurance on referrals to a transplant center, and health insurance status may be one of several reasons for not undergoing HSCT after an initial consultation. However, we hypothesize that even among patients who receive HSCT, insurance coverage influences the timing of transplant. We retrospectively analyzed the time to obtaining insurance approval and to proceeding to HSCT based on insurance status for that type of procedure at the time of the initial consultation. During the first quarter of 2006, 16 patients proceeded to autologous and 17 proceeded to allogeneic HSCT. Patients were categorized as having an insurance plan that covered their transplant or that had limitations. Limitations included either no coverage or insurance restrictions, such as initial denial requiring an appeal, no coverage for HLA-typing or search, or a waiting period. More than 25% of patients receiving either autologous or allogeneic HSCT experienced limitations imposed by their health insurance coverage. The median time to insurance approval (41 versus 93 days) and the median time to transplant (106 versus 218 days) was more than twice as long for those with limitations imposed by their insurance plan. Patients who initially had no transplant coverage ultimately received their transplant earlier than those with other restrictions, by either changing insurance plans or paying out-of-pocket. A complete analysis of 2006 will be updated at the time of presentation. This method of analysis undoubtedly underestimates the true impact of insurance coverage. Patients who have delays may experience disease relapse or other morbidity during that delay which precludes proceeding to HSCT. Even among those patients who were referred to our transplant center and received HSCT, the covered transplant may not have followed the initial

Impact of Insurance Coverage

	Insurance Approval, Days				Time to Transplant, Days		
	N	Median	Mean	Range	Median	Mean	Range
Insurance Coverage	24	41	53	0–155	106	119	13–346
Insurance Limitations	9	93	130	22–275	218	240	109–497
*Restrictions	4	68	81	22–168	232	268	109–497
*No Coverage	5	174	169	90–275	218	219	128–371